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<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/601,993	GALLOWAY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Linh M. Nguyen	2816	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**  
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 01/12/2005.
2. ☒ The allowed claim(s) is/are 1-14,17-19 and 21.
3. ☒ The drawings filed on 12 January 2005 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)  | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                  |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                                 | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date <u>03/02/05</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment  |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance                         |
|   | 9. <input type="checkbox"/> Other _____.   |

### DETAILED ACTION

This is a reply to the Applicants' amendment and submitted on 01/12/2005. According to this amendment, claims 15, 16 and 20 are cancelled; thus, claims 1-14, 17-19 and 21-22 are currently presented in the instant application.

#### *Examiner's Amendment*

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it must be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael A. Papalas on 03/02/2005.

The Examiner's Amendment includes:

#### CLAIMS:

Claim 1, line 1, delete "the";

Claim 7, line 1, delete "the";

Line 6, delete "and" (*in front of "developed"*);

Claim 13, line 7, insert --region-- after "dead-band";

Claim 17, line 3, change "a" to --the--;

Claim 18, line 1, change "15" to --17--;

Line 2, change "said" to --a--;

Claim 19, line 10, insert --region-- after "dead-band";

Line 12, delete "," after "resolve";

Claim 21, line 8, insert --region-- after "dead-band".

***Allowable Subject Matter***

2. Claims 1-14, 17-19 and 21-22 are allowed.

***Reasons for Allowance***

3. The following is an examiner's statement of reasons for allowance:

The closest prior art fails to disclose or fairly suggest:

- a) A method for bridging the dead-band including the step of resolving a metastability by allowing a portion of a rotation of the quadrature vector before asserting an output signal, in combination with the remaining claimed limitations, as called for in independent claim 1;
- b) A system for bridging the dead-band including a circuitry for allowing a portion of a rotation of the quadrature vector before asserting an output signal to resolve a metastability, in combination with the remaining claimed limitations, as called for in independent claim 7;
- c) A circuit for comparing two asynchronous signals including a circuit for delaying a glitch within a dead-band region for a period of time to allow the glitch to resolve, in combination with the remaining claimed limitations, as called for in independent claim 13;
- d) A method for comparing two asynchronous signals including the step of delaying a glitch within a dead-band region for a period of time to allow the glitch to resolve, in combination with the remaining claimed limitations, as called for in independent claim 19; and
- e) A VCO circuit including circuitry for delaying a glitch within a dead-band region for a period of time to allow the glitch to resolve, in combination with the remaining claimed limitations, as called for in independent claim 21.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Inquiry*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh M. Nguyen whose telephone number is (571) 272-1749. The examiner can normally be reached on Alternate Fri, Monday - Thursday from 7:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Linh M. Nguyen  
Primary Examiner  
Art Unit 2816

LMN

